Scale: 5" / 100'
Measured Depth Log

Well Name	Lone Ranger SWD Well #1		
Location	Section 7, Block 36, T2N		
State	Texas	**County**	Martin
Country	USA	**Rig Number**	Ensign 224
API Number	42-317-42648	**AFE #**	LoneRangerSWD#1
Geographic Region	Midland Basin	**Field**	Spraberry
Spud Date	11/18/2019	**Drilling Completed**	12/7/2019
Surface Coordinates	Lat: 32.362191 Long: -101.948021		
Bottom Hole Coordinates	TBD		
Ground Elevation	2847	**K.B. Elevation**	2872
Logged Interval	9750 **To** 13,180'	**Total Depth**	13,180'
Formation	Ellenburger		
Type of Drilling Fluid	WBM		

Operator

Company Tauras Water Midstream

Geologist

Name Zachary Bordovsky & Kehinde Opatola

Company TERRA GUIDANCE, LLC

Address 67 W.FLOYD AVE.
SUITE 105
ENGLEWOOD,CO 80110

Color Coding

Oil	Condensate	Gas
Note	Core	Pressure
Error	Water	Seal

Guidance

Rock Types

- UNKNOWN
- ANHYDRITE
- BENTONITE
- BRECCIA
- CEMENT
- CHALK
- CHERT
- CLAY CHOKE SAND
- CLAYSTONE
- COAL
- CONGLOMERATE
- DOLOMITE
- GRANITE
- GYPSUM
- IGNEOUS
- LIMESTONE
- SIDERITE or LIMONITE
- MARLSTONE
- METAMORPHIC
- NO SAMPLE
- SALT
- SALT- PEPPER SAND
- SANDSTONE
- SHALE
- SHALE COLORED
- SHALE GRAY
- SHALY SANDSTONE
- SHALY SILTSTONE
- SILTSTONE
- SILTY SHALE
- TILL
- TUFF
- WELDED TUFF

Accessories

Fossils

- ALGAE
- AMPHIPORA
- BELEMNITE
- BIOCLASTIC
- BRACHOIPOD
- BRYOZOA
- CEPHALOPOD
- CORAL
- CRINOID
- ECHINOID
- FISH
- FORAMINIFERA
- FOSSIL
- GASTROPOD
- INOCERAMUS
- OOLITE
- OSTRACOD
- PELECYPOD
- PELLET
- PISOLITE
- PLANT REMAINS
- PLANT SPORES
- SCAPHOPOD
- STROMATOPOROID

Minerals

- ANHYDRITIC
- ARGILLACEOUS
- ARGILLITE GRAIN
- BENTONITE
- BITUMENOUS SUBSTANCE
- BRECCIA FRAGMENTS
- CALCAREOUS
- CARBONACEOUS FLAKES
- CHTDK
- CHTLT
- COAL - THIN BEDS
- DOLOMITIC
- FELDSPAR
- FERRUGINOUS PELLET
- FERRUGINOUS
- GLAUCONITE
- GYPSIFEROUS
- HEAVY MINERAL
- KAOLIN
- MARLSTONE
- MINERAL CRYSTALS
- NODULES
- PHOSPHATE PELLETS
- PYRITE
- SALT CAST
- SANDY
- SILICEOUS
- SILTY
- TUFFACEOUS

Stringer

- ANHYDRITE STRINGER
- BENTONITE STRINGER
- COAL STRINGER
- DOLOMITE STRINGER
- GYPSUM STRINGER
- LIMESTONE STRINGER
- MARLSTONE (CALC) STRG
- MARLSTONE (DOL) STRG
- SANDSTONE STRINGER
- SHALE STRINGER
- SILTSTONE STRINGER
- Claystone Stringer

Other Symbols

Oil Show

- DEAD
- EVEN
- QUESTIONABLE
- SPOTTED STAINING

Porosity

- EARTHY
- FENESTRAL
- FRACTURE
- INTERCRYSTALLINE
- INTEROOLITIC
- MOLDIC
- ORGANIC
- PINPOINT
- VUGGY

Engineering

- BIT
- CONNECTION (LEFT)
- CONNECTION (RIGHT)
- CONNECTION GAS
- CORE - LOST
- CORE - RECOVERED
- DST INTERVAL
- FAULT
- FORMATION TOP
- GAS SHOW
- MN DEPTH
- NORMAL FAULT
- OIL SHOW
- OVERTURNED STRATA
- REVERSE FAULT
- SIDEWALL CORE (LEFT)
- SIDEWALL CORE (RIGHT)
- SLIDE
- SURVEY
- TRIP GAS
- WIRELINE TESTED - LEFT
- WIRELINE TESTED - RT

Rounding

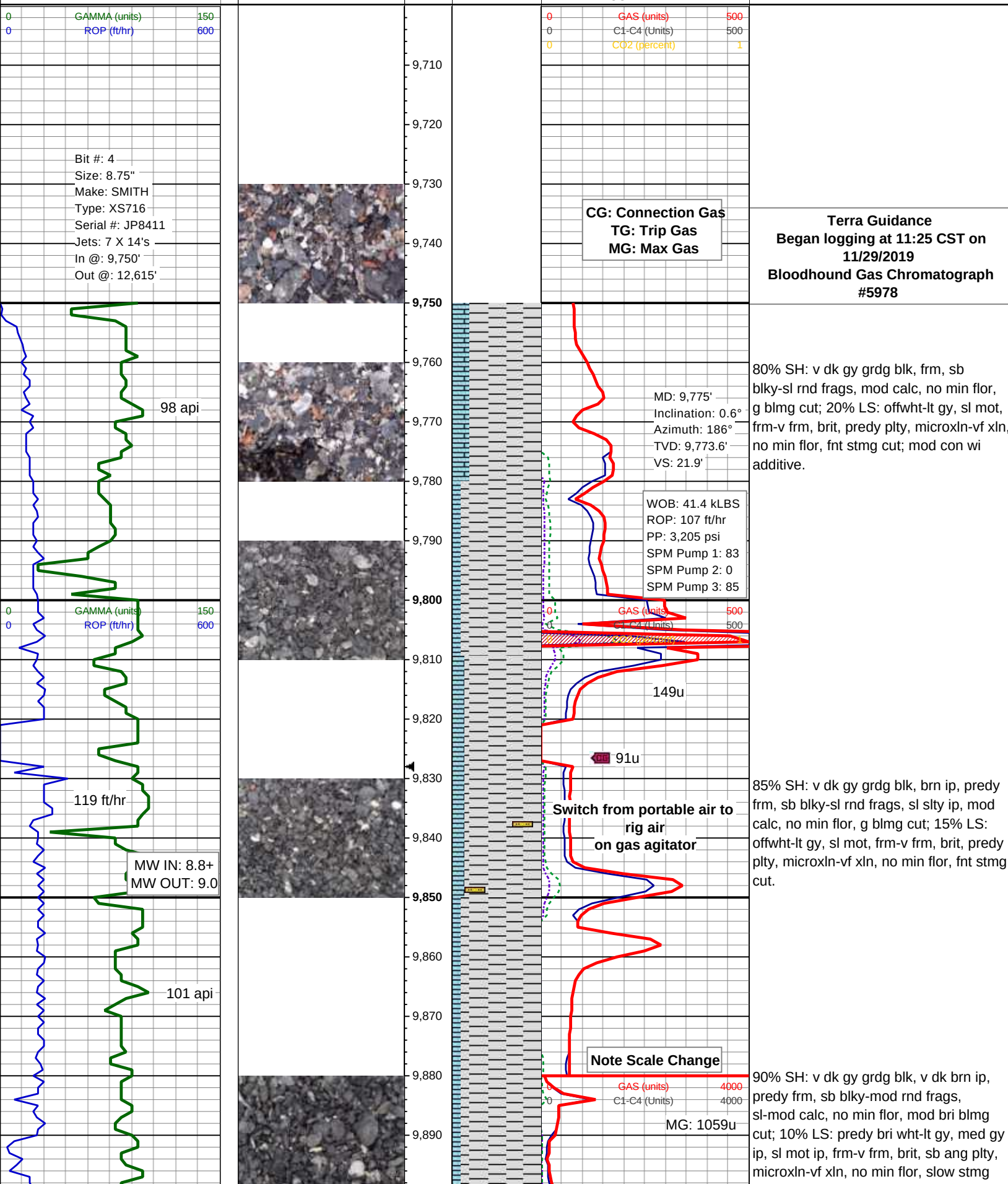
- ANGULAR
- ROUNDED
- SUBANG
- SUBRND

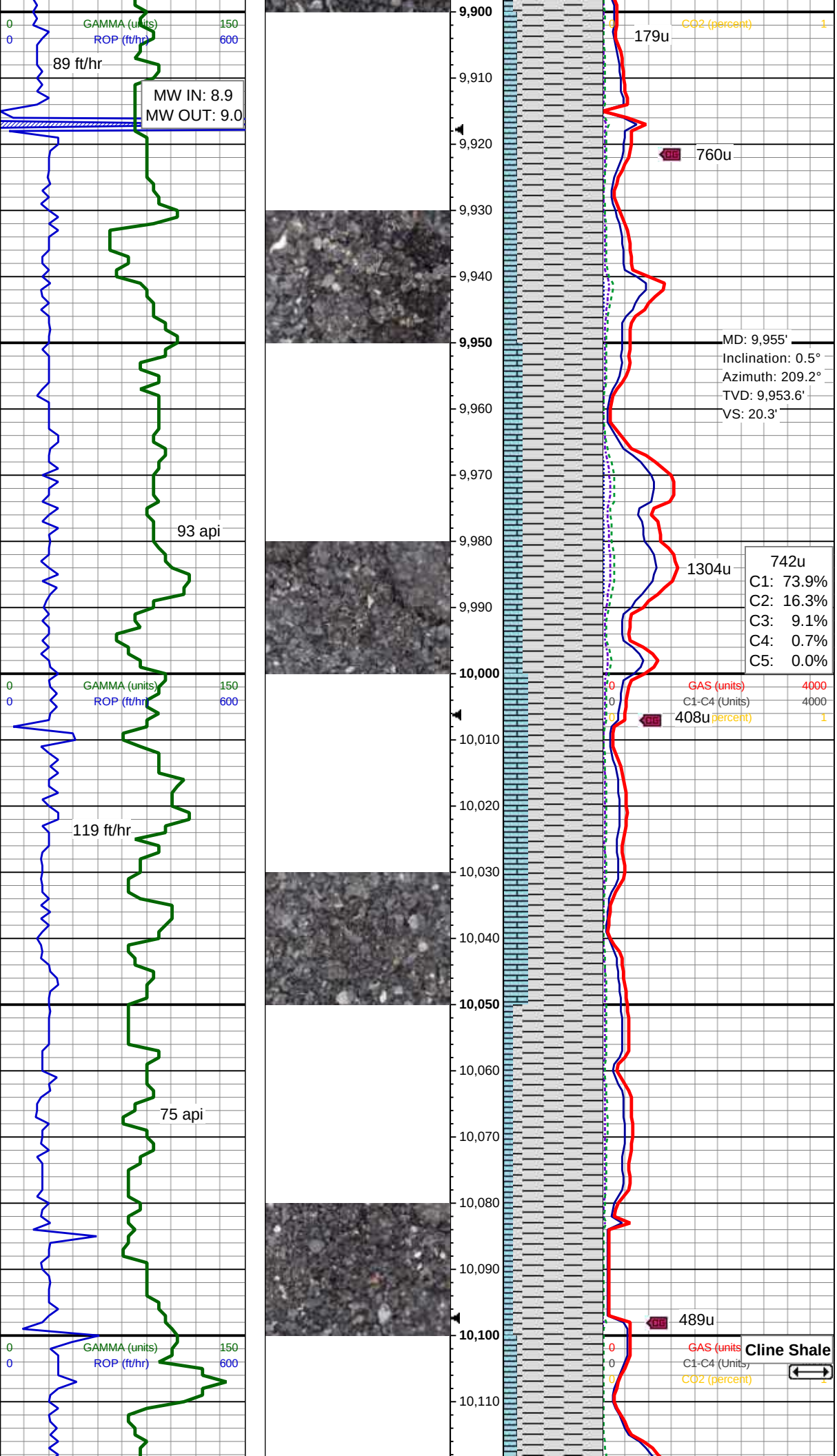
Textures

- BOUNDSTONE
- CHALKY
- CRYPTOXLN
- EARTHY
- FINELYXLN
- GRAINSTONE
- LITHOGRAPHIC
- MICROXLN
- MUDSTONE
- PACKSTONE
- WACKESTONE

Sorting

- MODERATE
- POOR
- WELL


ROP
GAMMA
ROP
Slide/Rotate
Images
Depth Labels
% Lith
Total Gas & Chromatograph
GAS
C1
C2
C3
C4
CO2
Lithology Descriptions
0 GAMMA (units) 150
0 ROP (ft/hr) 600
0 GAS (units) 500
0 C1-C4 (Units) 500
0 CO2 (percent) 1
Bit #: 4
Size: 8.75"
Make: SMITH
Type: XS716
Serial #: JP8411
Jets: 7 X 14's
In @: 9,750'
Out @: 12,615'
CG: Connection Gas
TG: Trip Gas
MG: Max Gas
Terra Guidance
Began logging at 11:25 CST on 11/29/2019
Bloodhound Gas Chromatograph #5978
98 api
MD: 9,775'
Inclination: 0.6°
Azimuth: 186°
TVD: 9,773.6'
VS: 21.9'
WOB: 41.4 kLBS
ROP: 107 ft/hr
PP: 3,205 psi
SPM Pump 1: 83
SPM Pump 2: 0
SPM Pump 3: 85
80% SH: v dk gy grdg blk, frm, sb blky-sl rnd frags, mod calc, no min flor, g blmg cut; 20% LS: offwht-lt gy, sl mot, frm-v frm, brit, predy plty, microxln-vf xln, no min flor, fnt stmg cut; mod con wi additive.
149u
91u
119 ft/hr
MW IN: 8.8+
MW OUT: 9.0
Switch from portable air to rig air on gas agitator
85% SH: v dk gy grdg blk, brn ip, predy frm, sb blky-sl rnd frags, sl slty ip, mod calc, no min flor, g blmg cut; 15% LS: offwht-lt gy, sl mot, frm-v frm, brit, predy plty, microxln-vf xln, no min flor, fnt stmg cut.
101 api
Note Scale Change
0 GAS (units) 4000
0 C1-C4 (Units) 4000
MG: 1059u
90% SH: v dk gy grdg blk, v dk brn ip, predy frm, sb blky-mod rnd frags, sl-mod calc, no min flor, mod bri blmg cut; 10% LS: predy bri wht-lt gy, med gy ip, sl mot ip, frm-v frm, brit, sb ang plty, microxln-vf xln, no min flor, slow stmg
9,710
9,720
9,730
9,740
9,750
9,760
9,770
9,780
9,790
9,800
9,810
9,820
9,830
9,840
9,850
9,860
9,870
9,880
9,890



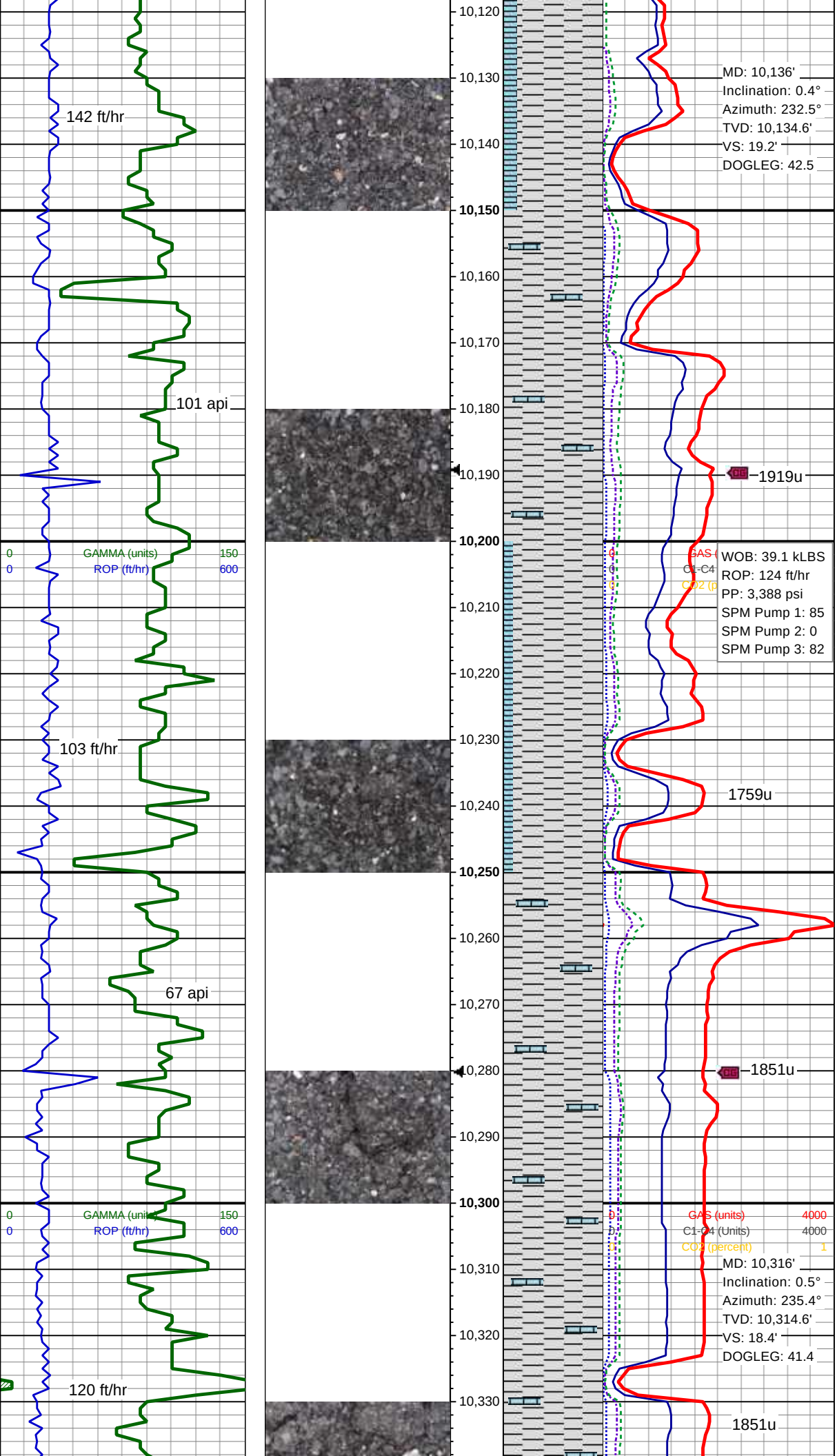
cut.

85% SH: v dk gy grdg blk, v dk brn ip, frm, sb blky-mod rnd frags, mod slty ip, sl-mod calc, no min flor, mod bri blmg cut; 15% LS: predy bri wht-lt gy, frm-v frm, brit, sb ang predy plty, microxln-vf xln, no min flor, slow mod p stmg cut.

80% SH: v dk gy, brn ip, predy frm, sb blky-sl rnd frags, sl slty ip, mod calc, no min flor, blmg cut; 20% LS: offwht-lt gy, sl mot, frm-v frm, brit, predy plty, microxln-vf xln, no min flor, fnt stmg cut.

75% SH: v dk gy grdg to blk, mod sft-mod frm, blky, sl slty, mas, calc, mnr cal replmt, no min flor, mod fast stmg cut; 25% LS: lt-med tn-brn, mod frm-brit, sb blky-sb ang, arg, micxln, no flor, fnt stmg cut.

90% SH: dk gy-dk brn-grdg to blk, mod frm, sb blky-sb plty, sl slty, mas, mod calc, rr intlam wi ls, no min flor, mod g stmg cut; 10% LS: lt-med tn-brn, predy frm-brit, sb blky-sb ang,mod arg, microxln ip,no min flor, blmg cut.

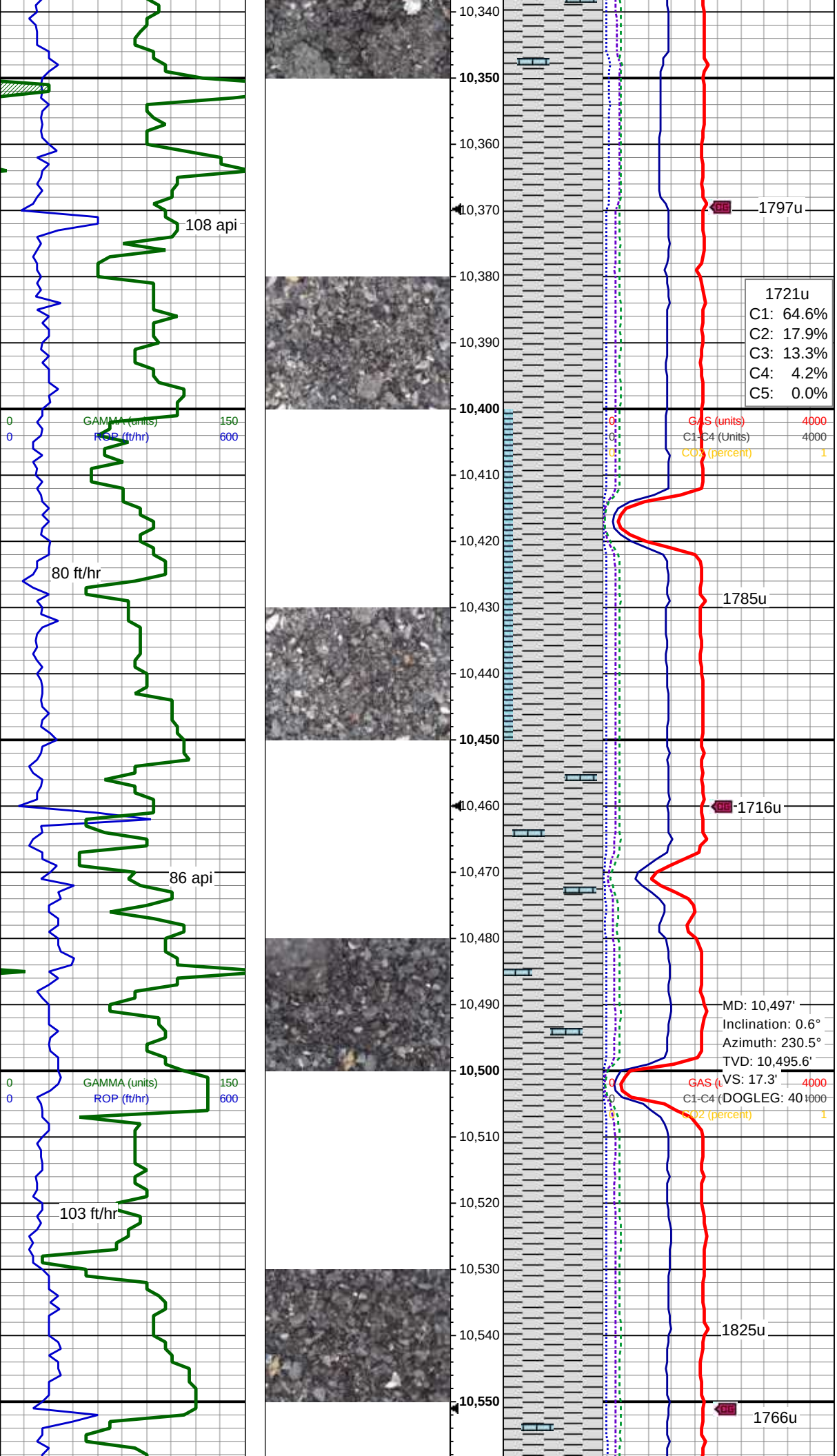


85% SH: dk gy-dk brn-grdg to blk, mod frm, sb blky-sb plty, sl slty, mas, mod calc, rr cal replmt, no min flor, mod fast stmg cut; 15% LS: lt-med, predy frm-brit, sb blky-sb ang, rthy-chky, mod arg, microxln ip, no min flor, slow blmg cut.

100% SH: dk gy-dk brn-grdg to blk, mod frm, sb blky-sb plty, sl slty, mas, mod calc, rr cal replmt, no min flor, mod g stmg cut; tr ls.

90% SH: v dk gy, predy frm, sb blky-mod rnd frags, sl-mod calc, no min flor, mod bri blmg cut; 10% LS: wht-lt gy, sl mot ip, frm-v frm, brit, sb ang plty, microxln-vf xln, no min flor, slow stmg cut.

100% SH: v dk gy grdg to blk, mod sft-mod frm, blky, sl slty, mas, calc, mnr cal replmt, no min flor, mod fast stmg cut; tr LS.



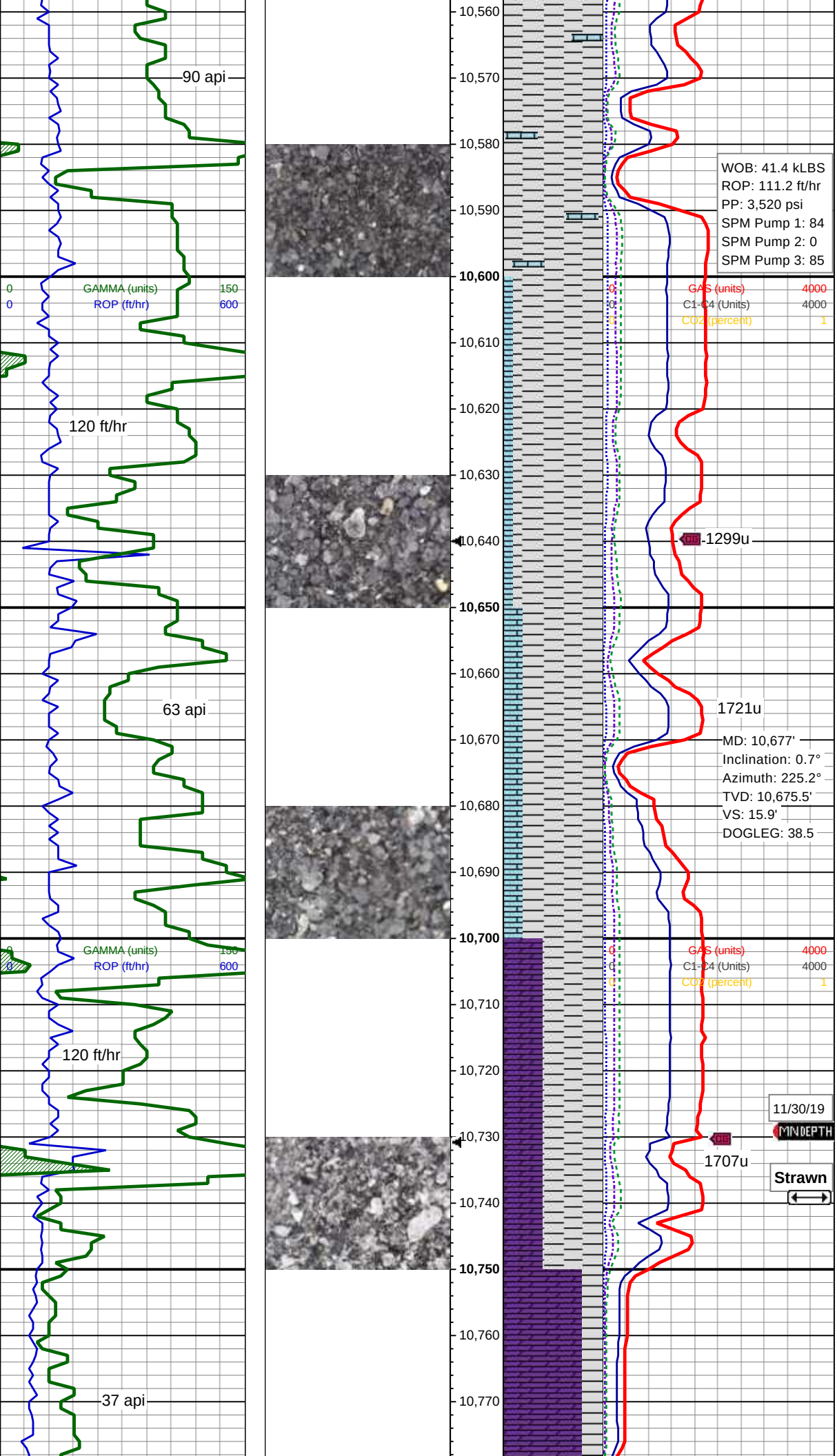
100% SH: v dk gy, brn ip, predy frm, sb blky-sl rnd frags, sl slty ip, mod calc, no min flor, blmg cut; tr LS.

100% SH: v dk gy grdg to blk, mod sft-mod frm, blky, sl slty, mas, calc, no min flor, mod stmg cut.

90% SH: v dk gy grdg blk, v dk brn ip, predy frm, sb blky-mod rnd frags, sl-mod calc, no min flor, mod bri blmg cut; 10% LS: predy bri wht-lt gy, med gy ip, sl mot ip, frm-v frm, brit, sb ang plty, microxln-vf xln, no min flor, slow stmg cut.

100% SH: v dk gy grdg to blk, mod sft-mod frm, blky, sl slty, mas, calc, mnr cal replmt, no min flor, mod fast stmg cut; tr LS.

100% SH: v dk gy grdg to blk, mod sft-mod frm, blky, sl slty, mas, calc, no min flor, mod stmg cut.

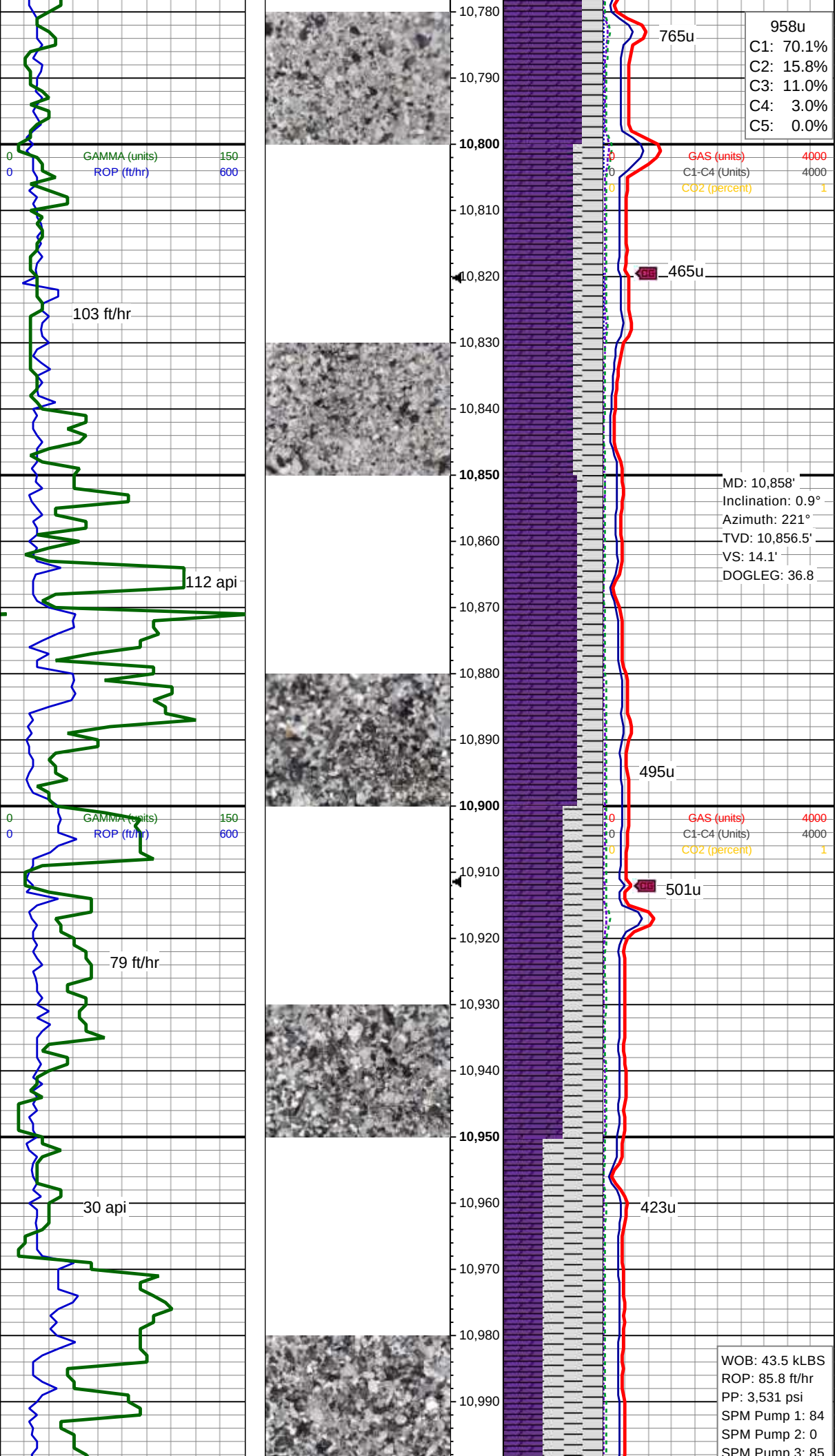


100% SH: v dk gy, brn ip, predy frm, sb blky-sl rnd frags, sl slty ip, mod calc, no min flor, blmg cut; tr LS.

90% SH: dk gy-dk brn-grdg to blk, mod frm, sb blky-sb plty, sl slty, mas, mod calc, rr intlam wi ls, no min flor, mod g stmg cut; 10% LS: lt-med tn-brn, predy frm-brit, sb blky-sb ang,mod arg, microxln ip,no min flor, blmg cut.

80% SH: v dk gy grdg blk, brn ip, predy frm, sb blky-sl rnd frags, mod calc, no min flor, g blmg cut; 20% LS: offwht-lt gy, frm-v frm, brit, predy plty, microxln-vf xln, no min flor, fnt stmg cut.

60% SH: v dk gy grdg to blk, mod sft-mod frm, blky, sl slty, mas, calc, no min flor, mod stmg cut; 40% DOL: offwht- crm, dk gy ip, v hd, microxln, rhmbc tex, sl sug, lmy dol, no min flor, mod stmg cut.



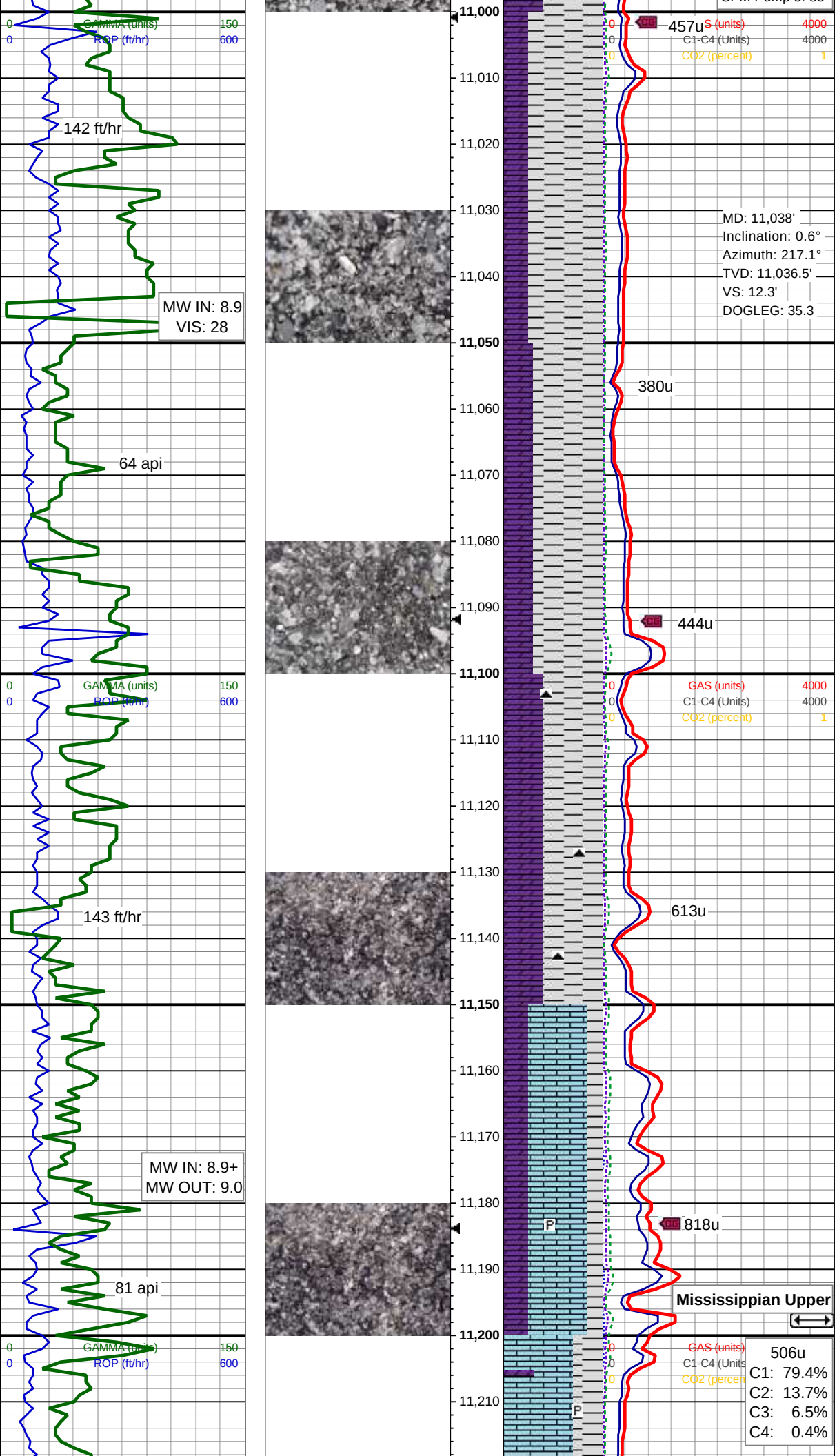
80% DOL: offwht- crm, v hd, microxln, rhmbc tex, sl sug, lmy dol, calc, no min flor, mod stmg cut; 20%SH: dk gy-dk, mod frm, sb blky-sb plty, mod calc, no min flor, mod g stmg cut.

70% DOL: offwht-crm-med brn, v hd-mod hd ip, microxln, rhmbc tex, predy suc, lmy dol, mod calc, no min flor, mod fast stmg cut; 30% SH: v dk gy, predy frm, sl slty ip, mod calc, no min flor, blmg cut.

75% DOL: offwht- crm, v hd, microxln, rhmbc tex, sl sug, lmy dol, calc, no min flor, fnt stmg cut; 25% SH: v dk gy, brn ip, predy frm, sl slty ip, mod calc, no min flor, blmg cut.

60% DOL: offwht- crm, v hd, microxln, sl sug, lmy dol, calc, no min flor, mod stmg cut; 40% SH: dk gy, mod frm, sb blky-sb plty, calc, no min flor, mod g stmg cut.

60% SH: v dk gy grdg to blk, mod sft-mod frm, blky, sl slty, mas, calc, no min flor, mod stmg cut; 40% DOL: offwht- crm, dk gy ip, v hd, microxln, rhmbc tex, sl sug, lmy dol, no min flor, mod stmg cut

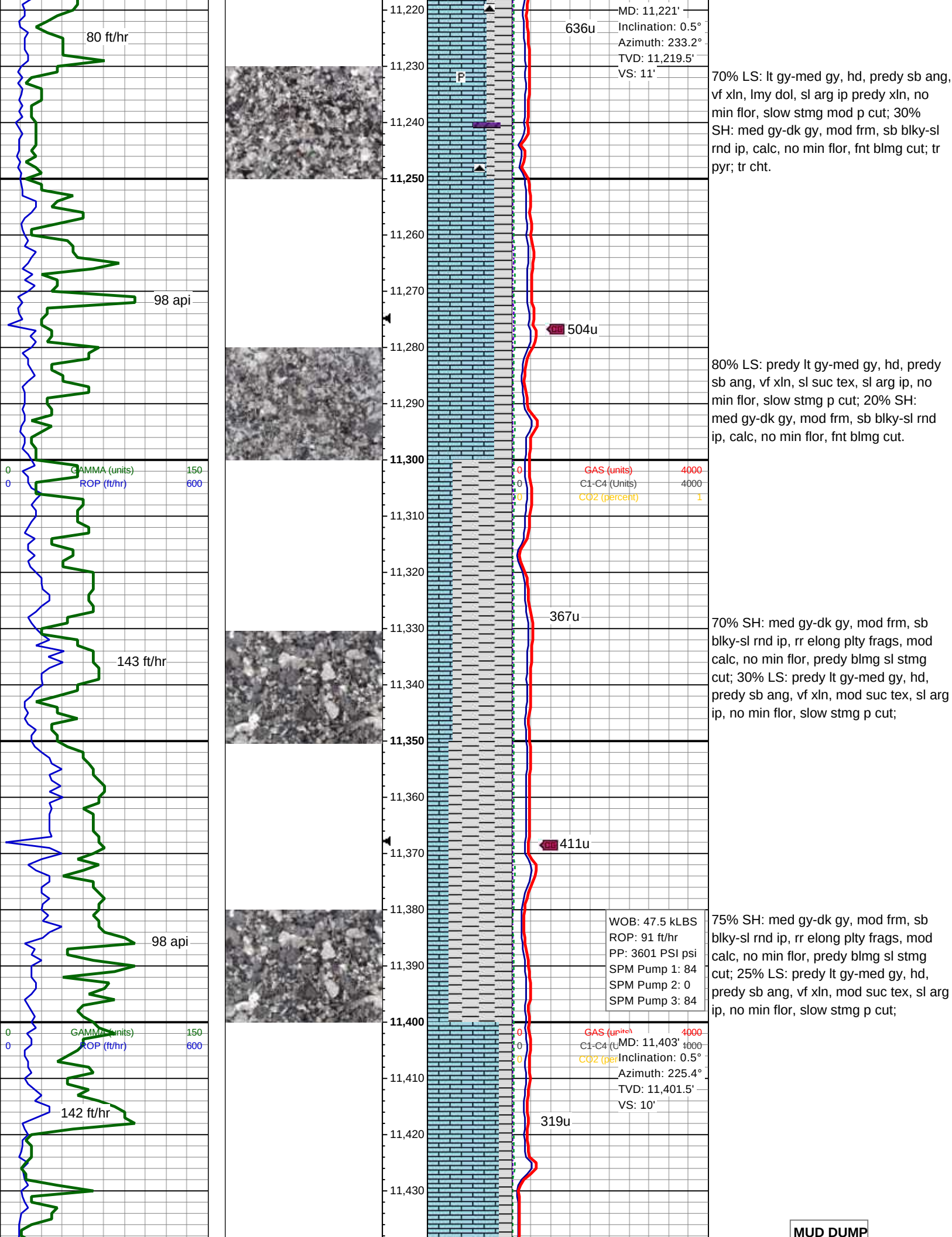


75% SH: v dk gy grdg to blk, mod sft-mod frm, blky, sl slty, calc, no min flor, mod stmg cut; 25% DOL: offwht, v hd, microxln, rhmbc tex, lmy dol, no min flor, mod stmg cut.

70% SH: v dk gy grdg blk, mod frm, blky-sl plty ip, sl slty, mod calc, no min flor, mod fnt slow blmg cut; 30% DOL: offwht-gy, v hd, brit, microxln, rhmbc tex, lmy dol, no min flor, slow fnt stmg cut.

60% SH: v dk gy grdg blk, mod frm, blky-sl plty ip, sl slty, mod calc, no min flor, mod fnt slow blmg cut; 40% DOL: offwht-gy, mod bri wht ip, v hd, brit, sb ang-plty, microxln, rhmbc tex, lmy dol, no min flor, slow fnt stmg cut.

60% LS: lt gy-med gy, hd, predy sb ang, vf xln, lmy dol, sl arg ip predy xln, no min flor, slow stmg mod p cut, 25% DOL: offwht- crm, v hd, microxln, sl sug, lmy dol, calc, no min flor, mod stmg cut; 15% SH: med gy-dk gy, mod frm, sb blky-sl rnd ip, calc, no min flor, fnt blmg cut; tr pyr.



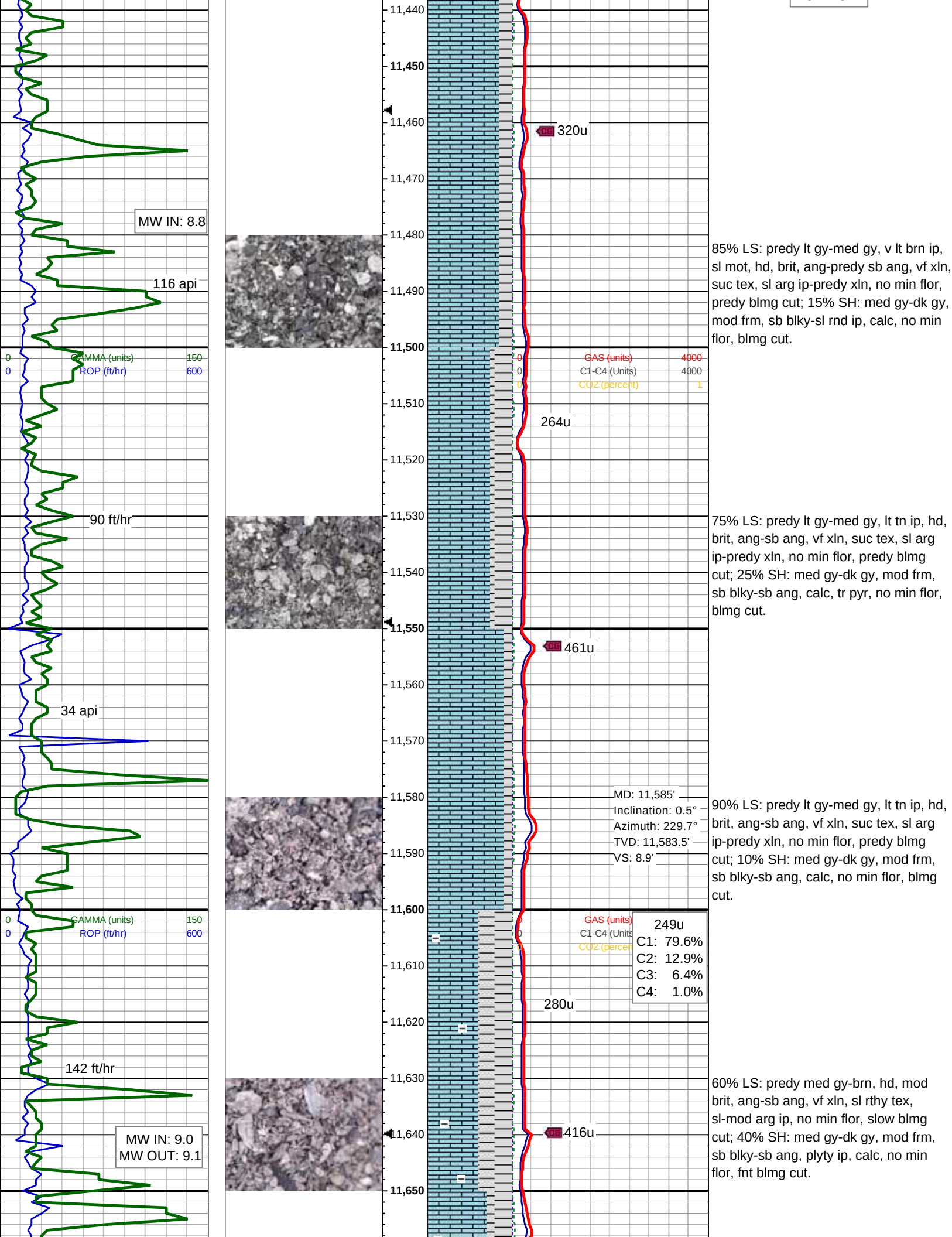
70% LS: lt gy-med gy, hd, predy sb ang, vf xln, lmy dol, sl arg ip predy xln, no min flor, slow stmg mod p cut; 30% SH: med gy-dk gy, mod frm, sb blky-sl rnd ip, calc, no min flor, fnt blmg cut; tr pyr; tr cht.

80% LS: predy lt gy-med gy, hd, predy sb ang, vf xln, sl suc tex, sl arg ip, no min flor, slow stmg p cut; 20% SH: med gy-dk gy, mod frm, sb blky-sl rnd ip, calc, no min flor, fnt blmg cut.

70% SH: med gy-dk gy, mod frm, sb blky-sl rnd ip, rr elong plty frags, mod calc, no min flor, predy blmg sl stmg cut; 30% LS: predy lt gy-med gy, hd, predy sb ang, vf xln, mod suc tex, sl arg ip, no min flor, slow stmg p cut;

75% SH: med gy-dk gy, mod frm, sb blky-sl rnd ip, rr elong plty frags, mod calc, no min flor, predy blmg sl stmg cut; 25% LS: predy lt gy-med gy, hd, predy sb ang, vf xln, mod suc tex, sl arg ip, no min flor, slow stmg p cut;

MUD DUMP

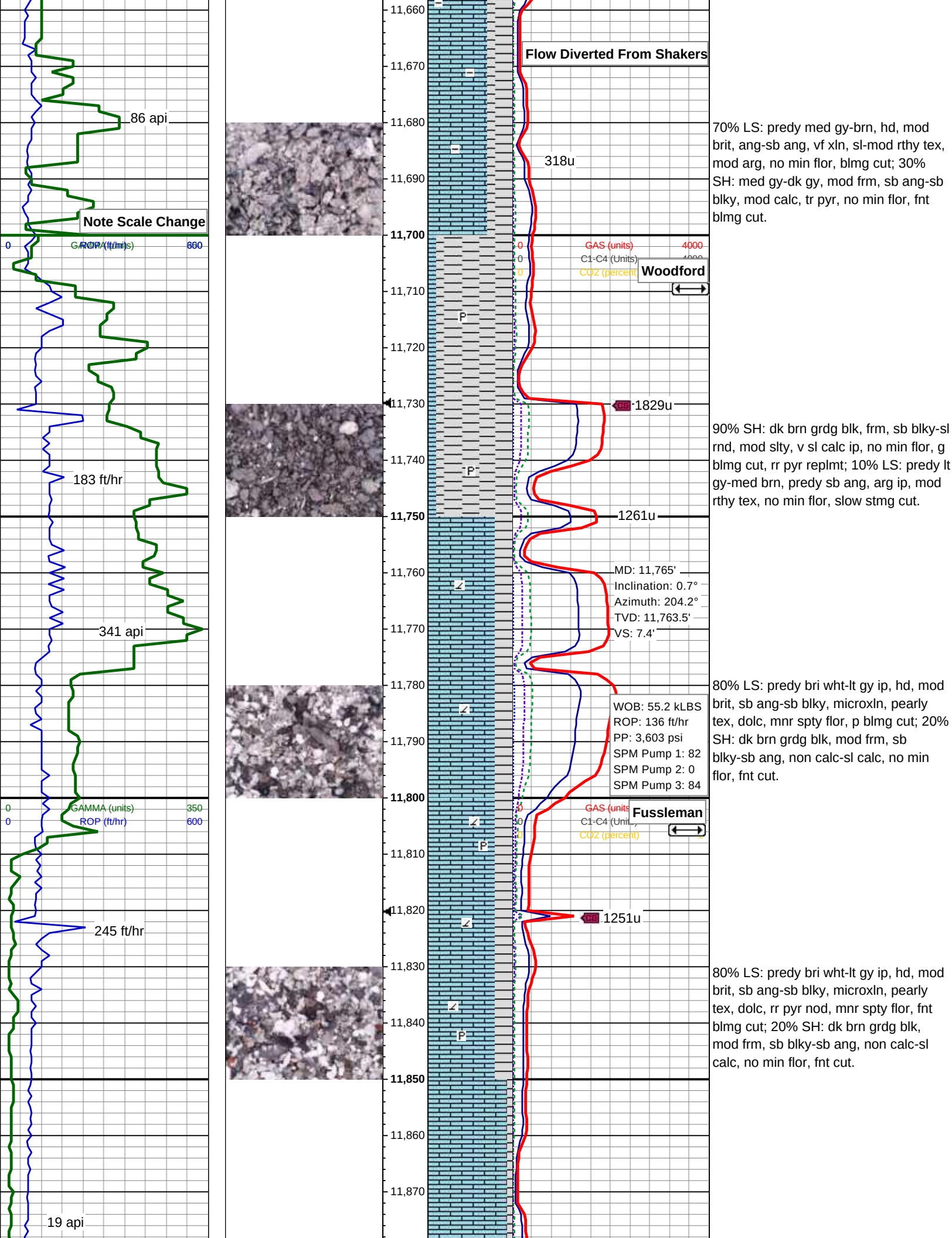


85% LS: predy lt gy-med gy, v lt brn ip, sl mot, hd, brit, ang-predy sb ang, vf xln, suc tex, sl arg ip-predy xln, no min flor, predy blmg cut; 15% SH: med gy-dk gy, mod frm, sb blky-sl rnd ip, calc, no min flor, blmg cut.

75% LS: predy lt gy-med gy, lt tn ip, hd, brit, ang-sb ang, vf xln, suc tex, sl arg ip-predy xln, no min flor, predy blmg cut; 25% SH: med gy-dk gy, mod frm, sb blky-sb ang, calc, tr pyr, no min flor, blmg cut.

90% LS: predy lt gy-med gy, lt tn ip, hd, brit, ang-sb ang, vf xln, suc tex, sl arg ip-predy xln, no min flor, predy blmg cut; 10% SH: med gy-dk gy, mod frm, sb blky-sb ang, calc, no min flor, blmg cut.

60% LS: predy med gy-brn, hd, mod brit, ang-sb ang, vf xln, sl rthy tex, sl-mod arg ip, no min flor, slow blmg cut; 40% SH: med gy-dk gy, mod frm, sb blky-sb ang, plyty ip, calc, no min flor, fnt blmg cut.

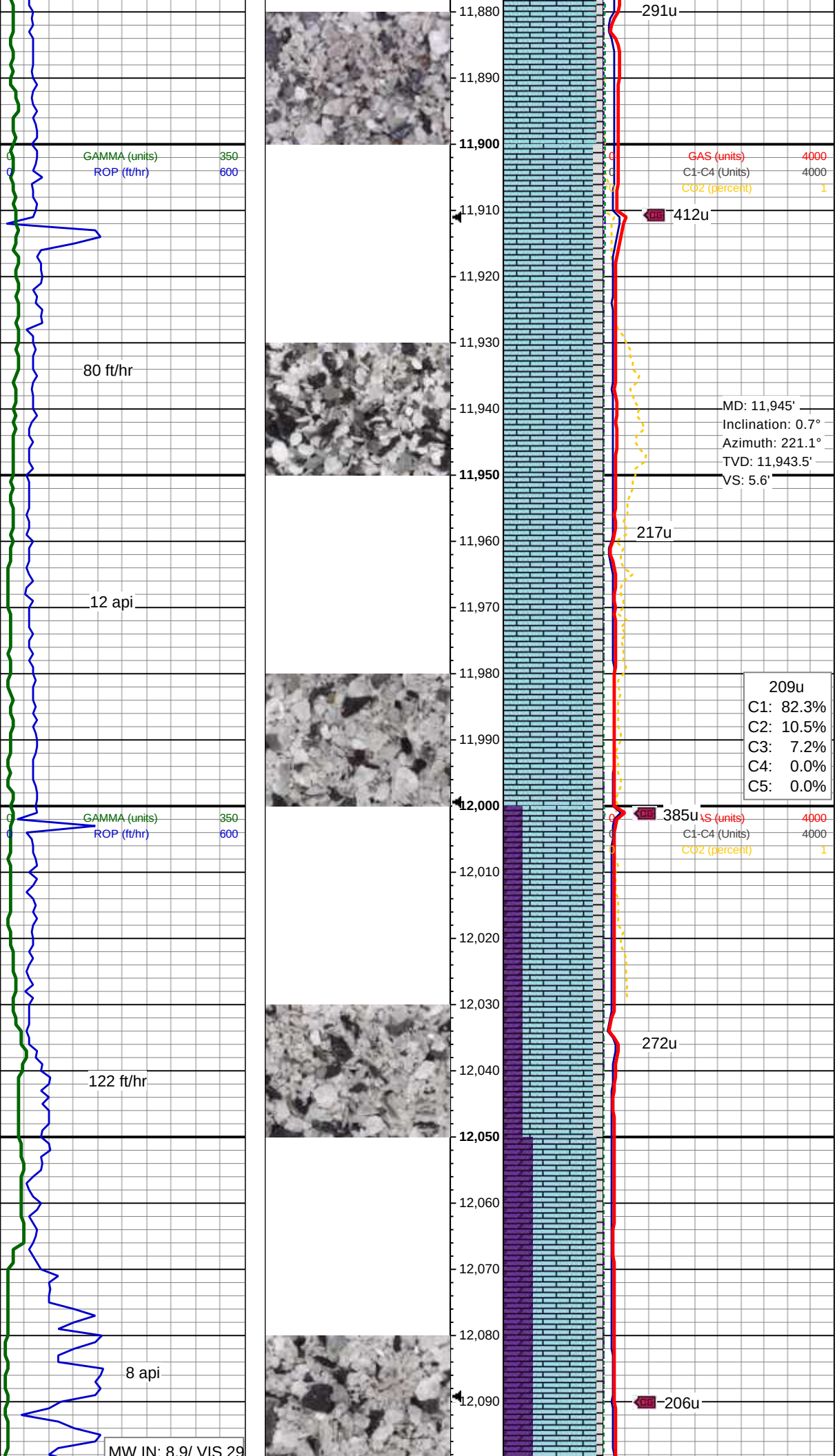


70% LS: predy med gy-brn, hd, mod brit, ang-sb ang, vf xln, sl-mod rthy tex, mod arg, no min flor, blmg cut; 30% SH: med gy-dk gy, mod frm, sb ang-sb blky, mod calc, tr pyr, no min flor, fnt blmg cut.

90% SH: dk brn grdg blk, frm, sb blky-sl rnd, mod slty, v sl calc ip, no min flor, g blmg cut, rr pyr replmt; 10% LS: predy lt gy-med brn, predy sb ang, arg ip, mod rthy tex, no min flor, slow stmg cut.

80% LS: predy bri wht-lt gy ip, hd, mod brit, sb ang-sb blky, microxln, pearly tex, dolc, mnr spty flor, p blmg cut; 20% SH: dk brn grdg blk, mod frm, sb blky-sb ang, non calc-sl calc, no min flor, fnt cut.

80% LS: predy bri wht-lt gy ip, hd, mod brit, sb ang-sb blky, microxln, pearly tex, dolc, rr pyr nod, mnr spty flor, fnt blmg cut; 20% SH: dk brn grdg blk, mod frm, sb blky-sb ang, non calc-sl calc, no min flor, fnt cut.



95% LS: offwht-lt gy, v lt tn ip, v frm-hd, mod brit, sb ang-sb blky, microxln, suc tex, no min flor, slow fnt cut; 5% SH: dk brn grdg blk, mod frm, sb blky-plty, non calc-sl calc, no min flor, wk cut.

90% LS: offwht-lt gy, v lt tn ip, sft-frm, mod brit, f-microxln, suc tex, no min flor; 10% SH: dk brn grdg blk, predy frm, sb blky-plty ip, non calc-sl calc, no min flor.

90% LS: offwht-lt gy-tn ip, predy brit, f-microxln, suc tex, no min flor; 10% SH: dk brn-blk, mod frm, sb blky-plty, non calc-sl calc, no min flor.

70% LS: offwht-tan ip, sft, vfg-microxln, dolc; 20% DOL: offwht-crm, dk gy, sft, microxln, lmy dol; 10% SH: dk gy-blk, sb blky-lamn-fiss ip, frm, slty, flky ip, calc; nfsoc.

65% LS: wht-offwht-tan ip, sft-frm, vfg-microxln, dolc; 30% DOL: offwht-crm ip, tr dk gy, sft, microxln, rhmbc tex, lmy dol. 5% SH: v dk gy-blk, sb blky-lamn-fiss ip, frm, slty, flky ip, calc.

GAMMA (units) 350
ROP (ft/hr) 600

245 ft/hr

131 api

67 ft/hr

34 api

GAMMA (units) 350
ROP (ft/hr) 600

GAS (units) 4000
C1-C4 (Units) 4000
CO2 (percent) 1

MD: 12,125'
Inclination: 0.7°
Azimuth: 243.3°
TVD: 12,123.5'
VS: 4.3'

12,100
12,110
12,120
12,130
12,140
12,150
12,160
12,170
12,180
12,190
12,200
12,210
12,220
12,230
12,240
12,250
12,260
12,270
12,280
12,290
12,300
12,310

337u

204u

WOB: 69 kLBS
ROP: 57 ft/hr
PP: 3475 PSI psi
SPM Pump 1: 84
SPM Pump 2: 81
SPM Pump 3: 0

220u

325u

P

P

MD: 12,305'
Inclination: 0.7°
Azimuth: 239°
TVD: 12,303.4'
VS: 3.2'

70% LS: wht-offwht-tan ip, sft, vfg-microxln, dolc; 25% DOL: offwht-crm, dk gy, sft, microxln, rhmbc tex, lmy dol. 5% SH: v dk gy-blk, sb blky-fiss, frm-brit, slty, flky ip, calc; nfsoc.

80% LS: wht-offwht-tan ip, sft, vfg-microxln, dolc; 10% DOL: offwht-crm, dk gy, sft, microxln, rhmbc tex, sl sug, lmy dol. 10% SH: v dk gy-blk, sb blky-lamn-fiss ip, frm, slty, flky ip, calc; nfsoc.

70% LS: wht-offwht-tan ip, sft, vfg-microxln, dolc; 25% DOL: offwht-crm, dk gy, sft, microxln, rhmbc tex, sl sug, lmy dol. 5% SH: v dk gy-blk, sb blky-lamn-fiss ip, frm, slty, flky ip, calc; nfsoc.

90% LS: offwht-lt gy, v lt tn ip, sft-v frm, mod brit, microxln, suc tex, no min flor; 10% SH: dk brn grdg blk, mod frm, sb blky-plty-tr fis, non calc-sl calc, no min flor.

105 ft/hr

38 api

91 ft/hr

64 api

55 ft/hr

0 GAMMA (units) 350
0 ROP (ft/hr) 600

12,320
12,330
12,340
12,350
12,360
12,370
12,380
12,390
12,400
12,410
12,420
12,430
12,440
12,450
12,460
12,470
12,480
12,490
12,500
12,510
12,520
12,530

214u

142u

151u
C1: 76.1%
C2: 14.8%
C3: 9.1%
C4: 0.1%
C5: 0.0%

MD: 12,396'
Inclination: 0.7°
Azimuth: 251.7°
TVD: 12,394.43'
VS: 2.73'

0 GAS (units) 4000
0 C1-C4 (Units) 4000
0 CO2 (percent) 1

152u

196u

MD: 12,486'
Inclination: 0.9°
Azimuth: 246.4°
TVD: 12,484.42'
VS: 2.27'

12/01/19
MNDEPTH

0 GAS (units) 4000
0 C1-C4 (Units) 4000
0 CO2 (percent) 1

Sylvan

302u

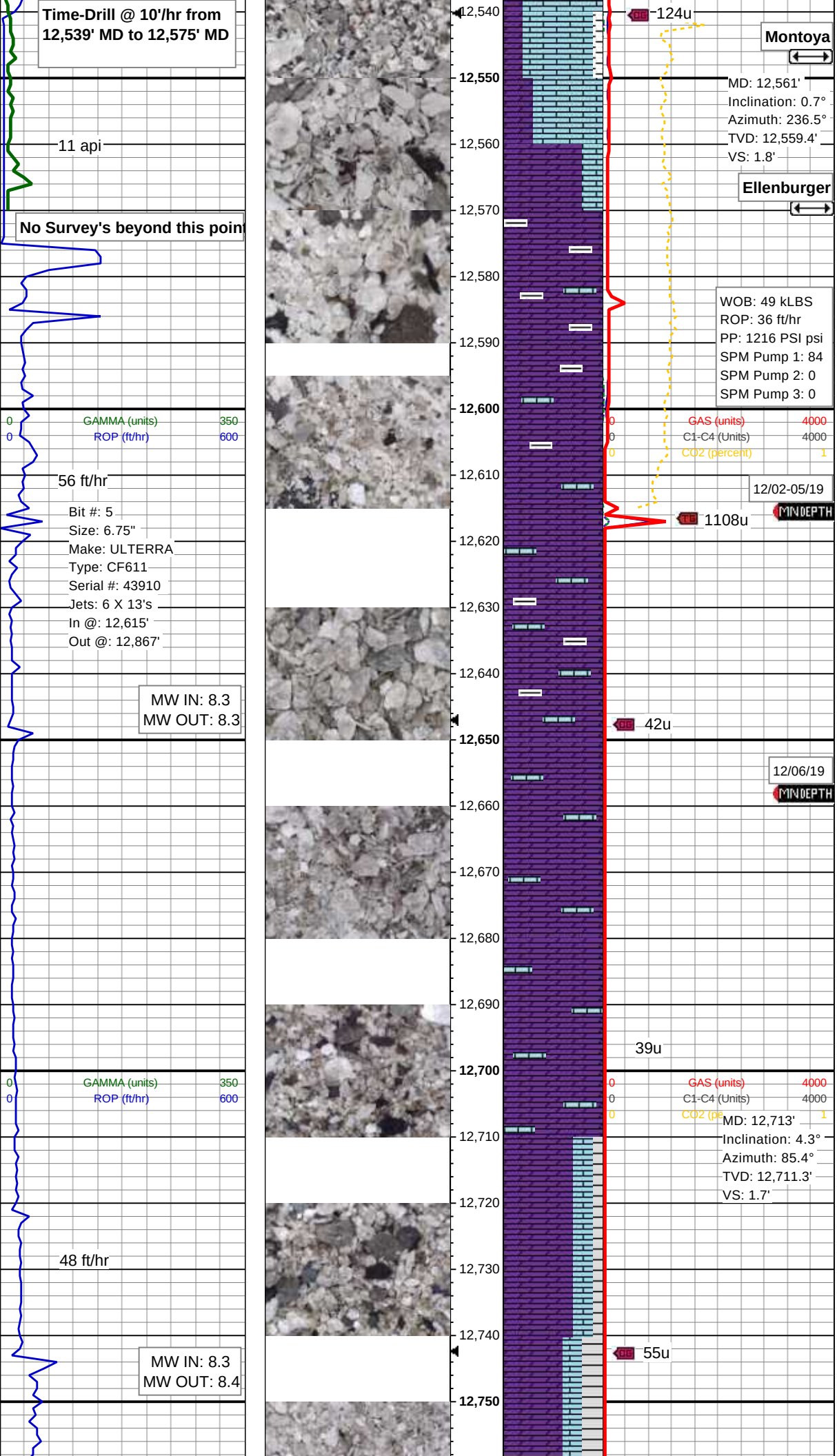
80% LS: offwht-buff-tn ip, predy sft-tr frm, vfg-microxln, arg tex, v calc, rr pyr nod; 20% DOL: offwht-crm-lt brn-tr blk, sft-frm, microxln, rhmbc tex, sl sug, lmy dol; TR SH.

80% LS: offwht-buff, sft-frm, vfg-microxln, sm, arg tex, v calc, v f gr, rr pyr nod; 20% DOL: offwht-crm-lt brn, sft-frm, microxln, rhmbc tex, sl sug, lmy dol; TR SH.

100% LS: predy offwht-lt gy-tn ip, sft-frm, mod brit, f-microxln, pearly tex, dolc, rr pyr nod nfsoc, TR SH.

90% LS: offwht-buff-lt tn ip, predy frm, vfg-microxln, v calc; 10% DOL: offwht-crm-lt brn, sft-frm, microxln, rhmbc tex, lmy dol; TR SH.

70% LS: wht-offwht-tan ip, predy frm-tr hd, vfg-microxln, dolc; 20% DOL:



offwht-crm, dk gy, frm, microxln, lmy dol. 10% SH: lt gy-dk gy-blk, sb blky-lam ip, frm, slty, flky ip, calc; nfsoc.

100% DOL: offwht wi v lt stn, mod hrd, v brit, pred ang-sb ang frags, vf xln, sl suc tex, mnr sp fnt flor, fnt cut; tr ls; mod con wi sh.

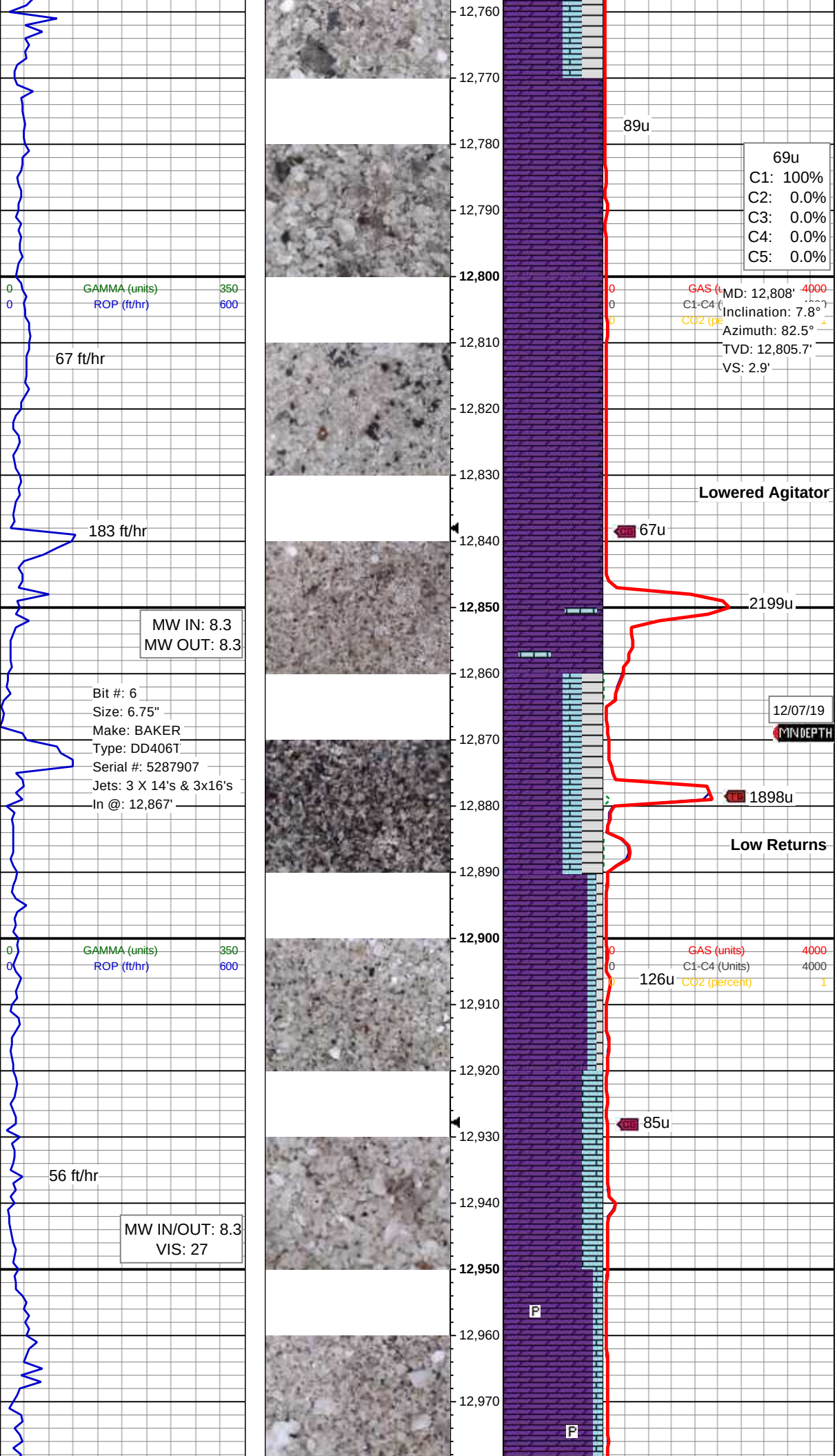
100% DOL: offwht wi v lt stn, mod hrd, v brit, pred ang-sb ang frags, vf xln, sl suc tex, mnr sp fnt flor, fnt cut; tr ls; mod con wi sh.

TOOH on 12/1/19 at 06:42 CT
Run Logging Tools
& Set Casing

100% DOL: offwht-tn wi v lt stn, predy frm-mod hrd, sl brit, pred ang-sb ang frags, vf-f xln, sl suc tex, mnin flor; TR LS; TR SH.

100% DOL: offwht-tn wi v lt stn, frm-mod hrd-brit, scat sb ang frags, vf-f xln, sl suc tex, min flor; TR LS; TR SH.

70% LS: wht-offwht-tan ip, predy frm-tr hd ip, f grn-microxln, dolc; 20% DOL: offwht-crm wht ip, frm, microxln, lmy dol. 10% SH: lt gy-dk gy-blk, sb blky-lam ip, frm, slty, flky ip, calc; scat min flor.



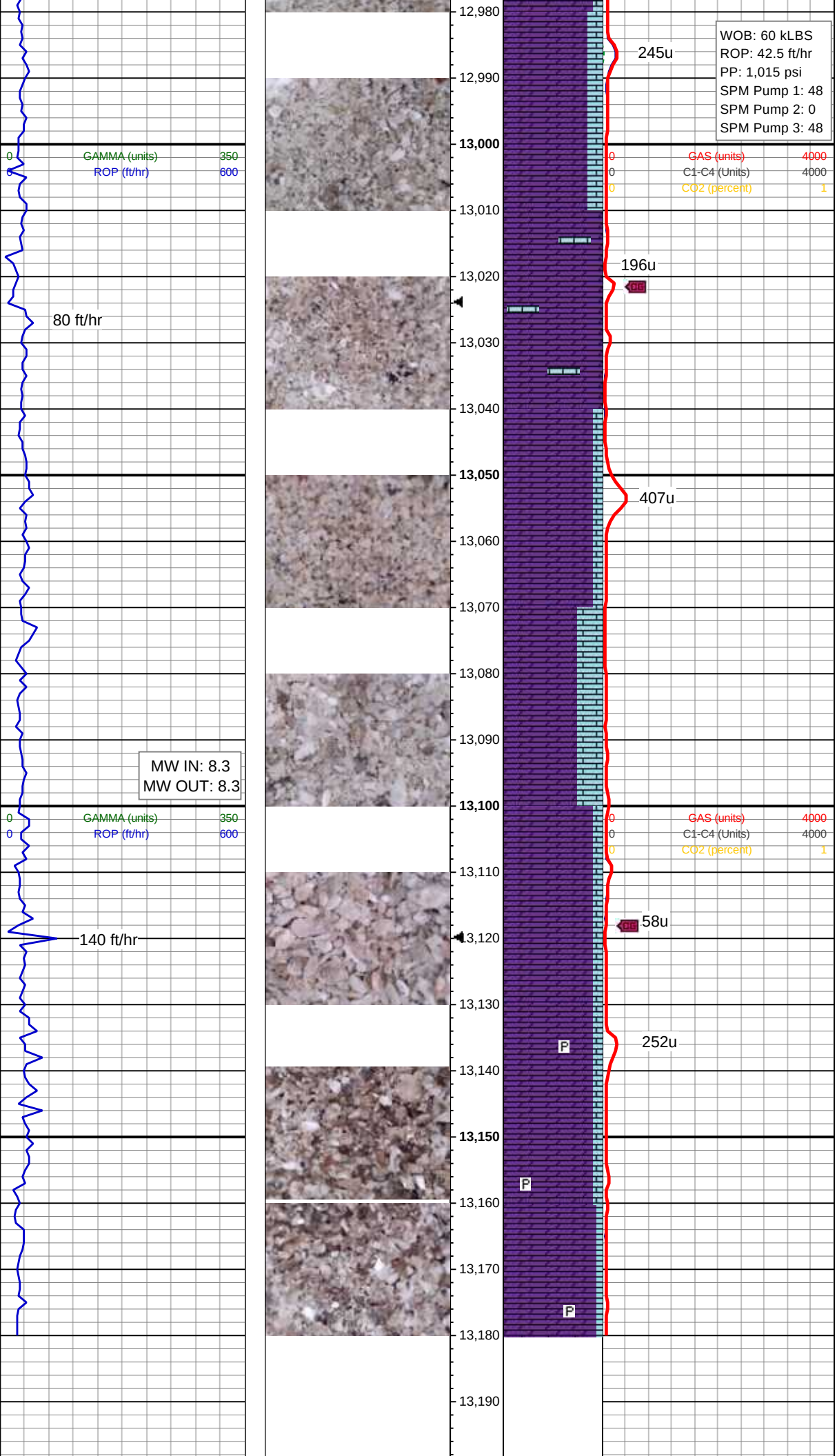
100% DOL: offwht-tn-crm wht, frm-mod hrd, v brit ip, pred ang-sb ang frags, predy vf xln, sl suc tex, min flor, fnt cut; TR LS.

100% DOL: offwht wi v lt tn stn, hrd, v brit ip, ang ip-predy sb ang, vf xln, suc tex, mnr spty flor, wk cut; tr ls.

TOOH on 12/6/19 at 10:18 CT
For New Bit
Resumed Drilling on 12/7/19 at 05:00

85% DOL: offwht-v lt tn, hrd, v brit, microxln-vf xln, lmy dol, mnr min flor, mod wk cut; 10% LS: bri wht-v lt gy, hrd, mod brit, f grn-microxln, dolc ip, no min flor; 5% SH: dk gy grdg blk, frm, predy arg sl slty, sl calc, no min flor.

90% DOL: offwht-v lt tn, v frm-hrd, v brit, predy sb ang frag, vf xln, lmy dol, v mnr pyr replmt, mnr min flor, wk cut; 10% LS: bri wht-v lt gy, hrd, mod brit, f grn-microxln, dolc ip, no min flor; tr sh.



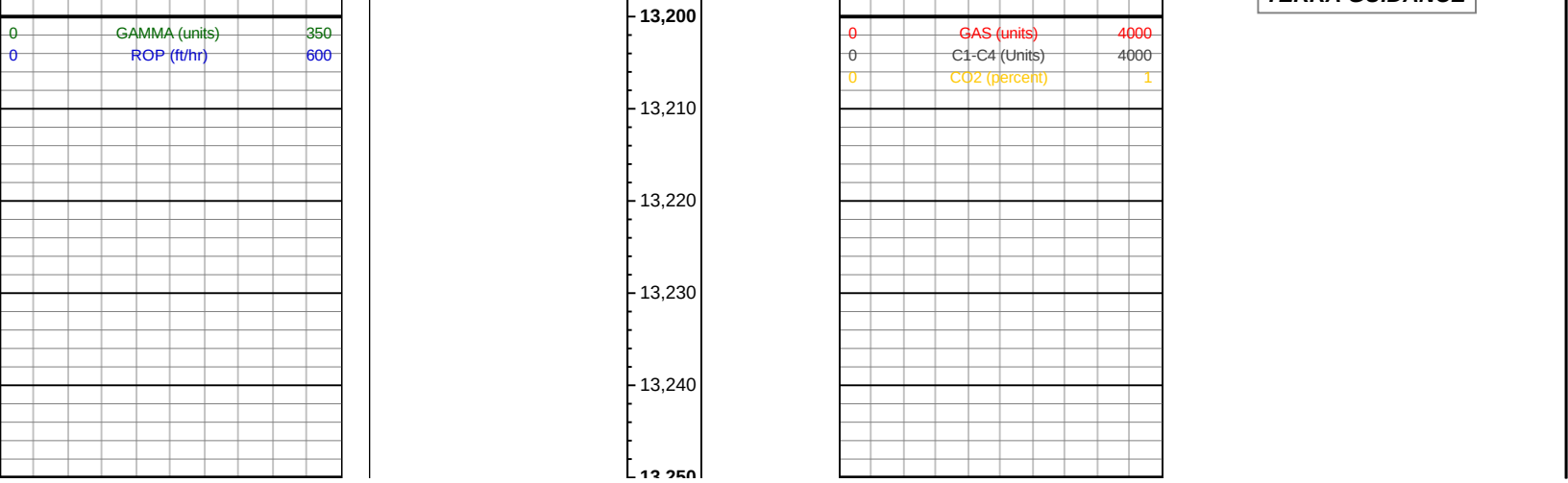
100% DOL: offwht-v lt tn, mod hrd, v brit, predy sb ang frag, vf xln, lmy dol, occ cal frags, mnr min flor, wk cut; tr ls, tr sh.

75% DOL: offwht wi v lt tn stn ip, bri wht ip, v frm-hrd, v brit, predy sb ang frag, vf xln-microxln, lmy dol, mnr cal repl, mnr min flor, wk cut; 25% LS: predy offwht, v lt gy ip, v frm-hrd, mod brit, f grn-microxln, dolc ip, no min flor.

95% DOL: bri wht-offwht wi v lt brn stn ip, v frm-hrd, v brit, ang ip-predy sb ang frag, vf xln-microxln, lmy dol, mnr cal replmt, mnr min flor, p wk cut; 5% LS: off wht- v lt gy, v frm-hrd, mod brit, f grn-microxln, dolc, no min flor; tr pyr.

Well TD 13,180' MD on 12/7/2019 at 13:47 CST

Thank you for using TERRA GUIDANCE


0 GAMMA (units) 350
0 ROP (ft/hr) 600
13,200
13,210
13,220
13,230
13,240
13,250
0 GAS (units) 4000
0 C1-C4 (Units) 4000
0 CO2 (percent) 1